



NP 120 Part II:
Microbiota-Gut-Brain Axis and the Diet-Mental Health Relationship:
From Neurodevelopment to Neurodegeneration (CAMFT)

\$299 USD
33.25 CE

This course deepens your understanding of the microbiota-gut-brain axis in relation to the diet-mental health relationship and introduces the MGBA-DMHR conceptual model linking the two. This bidirectional conceptual model explores the bidirectional relationship between diet and mood, behavior, social functioning, psychological experience, eating behavior, and the development of psychiatric and neurological conditions.

You'll explore the influence of **dietary intake patterns** and various **food components** on **microbiota diversity, composition, and functioning**. and their mechanisms of action and avenues for the application of evidence-based dietary recommendations. You'll become knowledgeable about the role of **probiotics, prebiotics, and synbiotics** in fostering beneficial gut microbiota and gut-brain communication.

The role of **early-life developmental and nutritional programming** on the development, pathophysiology, and progression of **psychological, psychiatric, behavioral, neurodevelopmental, and neurodegenerative processes and disorders** is introduced, and the MGBA-DMHR systems within the body involved in the regulation of **stress response, resilience**, and mood, emotions and behavior.

You'll learn how gut microbiota participate in a symphony of **MGBA-DMHR mediated pathways**, molecular and physiological systems that orchestrate the regulation of brain from **development to degeneration**. These include **myelination, synaptogenesis, neural plasticity, neurogenesis, microglia, blood-brain barrier, intestinal barrier, vagus nerve, the HPA axis, neuropeptides, gut peptides, short-chain fatty acids, BDNF, and hormones**.

You'll examine how the MGBA-DMHR influences dietary behavior—**beyond basic hunger regulation**—to include hedonic eating, reward-driven choices, eating disorders, and addiction-related behaviors. This course, along with NP 120 Part I, NP 110, and NP 150 Parts I and II, completes your Introductory Certificate in Nutritional Psychology and builds a strong foundation in psychonutritional education.

Course meets the qualifications for 33.25 hours of continuing education credit for LMFTs, LCSWs, LPCCs, and/or LEPs as required by the California Board of Behavioral Sciences (CAMFT Provider #1000102)

LEARNING OBJECTIVES

- List two ways the **Western Diet** impacts MGBA-DMHR

Define **developmental programming** and describe the role of early colonization of gut microbiota in its implementation

Describe the connection between early-life stress (ELS) and the MGBA-DMHR (diet-mental health relationship)

Define **non-digestible carbohydrates** (NDCs) and describe their beneficial impact on gut microbiota

Identify three MGBA-DMHR bidirectional **communication pathways** underpinning the pathophysiology of clinical disorders

Explain the role of **short-chain fatty acids (SCFAs)** in the pathophysiology of anxiety and mood disorders
- Define **prebiotics** and explain their mechanisms of action in fostering a beneficial gut microbiota and the MGBA-DMHR

Describe the role of the MGBA-DMHR in the **hedonic** (non-homeostatic) regulation of **dietary intake behavior**

Describe the role of gut microbiota in modulating reward pathways and **cravings** associated with **addictive behaviors**

Explain two key mechanisms involved in the MGBA-DMHR regulation of **stress response and resilience**

Formulate two MGBA-DMHR **evidence-based recommendations** for a healthy diet supporting a balanced gut microbiota

COURSE DEVELOPERS

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COURSE POLICY

- Target Audience: Mental health, nutrition, and other professionals and interested individuals wanting to understand the evidence-based connection between diet, microbiota, and mental health.
- NP 120 Part I is a prerequisite to this course, which is part of the four-course **Certificate #2: Biological Mechanisms in Nutritional Psychology Certificate**, containing NP 120 Parts I & II, and NP 150 Parts I & II.
- CE hours do not include meals or breaks. Course certificates are awarded upon successful completion of the course and it's evaluation. If students do not receive their certificate they can email editor@nutritional-psychology.org. CNP maintains course records for 7 years.
- This course is accessible for **4 months (120 days)** from the date of enrollment. The course itself cannot be downloaded, however, "Module Download Kits" with key information from each module can be downloaded while enrolled in the course.
- Questions, concerns, or grievances may be directed to the course administrator, via the course messaging platform, or emailed to editor@nutritional-psychology.org. Failing a timely resolution, learners may follow instructions in the course Conflict Resolution Procedure.

The one-time course fee payment is due at the time of enrollment and is considered non-refundable. Exception for a partial refund (up to 75%) will be considered should the learner have proof of severe circumstances leaving them unable to complete the course.

